

Fulton County (New York), Tipulidae (Dipt.).—II.

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This is a continuation of the list in ENTOMOLOGICAL NEWS, June, 1910. Since the publication of that article, much of the undetermined 1909 collection has been worked over and an immense amount of new material collected. The total number of species definitely known from the county to date is about 125, which is more than is known from most States of the Union.

A few errors in the first part, most of which must be charged against the author, should be corrected: On page 248, thirteenth line in under 2, should read, "for several hundred feet." The altitude of the island is 750 feet (average), not 875 feet. On page 251, *Trichocera crumalis* should be *T. brumalis*.

New collecting grounds: Some of the new localities visited proved to have an extremely rich Tipulid fauna. The more notable of these are:

"Psocid Glen," on the west bank of the Cayudutta creek, between Johnstown and Sammonsville; a small creek flowing into the Cayudutta at the electric-light dam. Although at a low altitude (550 feet), the fauna is distinctly Canadian.

"Prairie Lake Bog" in Caroga Township (1,870 feet); a bog in the tertiary stage, supporting a perfectly normal oxylophytic type of vegetation, such as: *Solidago uliginosa*, *Gentiana linearis*, *Acer pennsylvanicum*, *A. rubrum*, *A. spicatum*, *Nemophanthus mucronata*, *Kalmia angustifolia*, *Andromeda polifolia*, *Chamaedaphne calyculata*, *Chiogenes hispidula*, *Vaccinium macrocarpon*, *Aronia melanocarpa*, *Sarracenia purpurea*, *Drosera rotundifolia*, *D. intermedia*, *Myrica gale*, and a variety of sedges.

Since the publication of the first part, the acceptance of Meigen's 1800 paper by most Dipterologists has changed many of the genera used in the *Tipulidae*. The names are given in Coquillett's "Type-Species of North American Diptera," but are widely scattered amongst the other genera of flies, so that

a compact record of the recent changes in nomenclature, as now held by many students of the family, may be of value.

Sub-fam. LIMNOBINÆ	AMPHINOMINÆ
Tribe LIMNOBINI	AMPHINOMINI
Genus <i>Limnobia</i> Meig. 1818	<i>Amphinome</i> Meig. 1800
Genus <i>Dicranomyia</i> Steph. 1829	<i>Furcomyia</i> Meig. 1818
Tribe ANTOCHINI, RHAMPHIDINI	MEGARHINI
Genus <i>Rhamphidia</i> Meig. 1830	<i>Megarhina</i> St. Farg. et Serv. 1828
Genus <i>Dicranoptycha</i> O. S. 1859	<i>Marginomyia</i> Meig. 1818
Tribe ERIOPTERINI	POLYMEDINI
Genus <i>Erioptera</i> Meig. 1803	<i>Polymeda</i> Meig. 1800
Genus <i>Rhypholophus</i> Kol. 1860	<i>Ormosia</i> Rond. 1856
Genus <i>Helobia</i> St. F. et S.; 1828; (preocc.)	<i>Symplecta</i> Meig. 1830
Tribe LIMNOPHILINI, TRICHOCERINI	PETAURISTINI
Genus <i>Trichocera</i> Meig. 1803	<i>Petaurista</i> Meig. 1800
Tribe ANISOMERINI	HEXATOMINI
Genus <i>Eriocera</i> Macq. 1838	<i>Caloptera</i> Guer. 1820
Genus <i>Amalopsis</i> Hal. 1856	<i>Tricyphona</i> Zett. 1837
Genus <i>Ctenophora</i> (of authors, non Meigen) ..	<i>Phoroctema</i> Coq. 1910
Genus <i>Xiphura</i> Brulle 1832; <i>Ctenophora</i> Meig. 1803.	
	<i>Flabellifera</i> Meig. 1800
Genus <i>Stygeropsis</i> Loew. 1863	<i>Prionocera</i> Loew. 1844
Family PTYCHOPTERIDÆ	LIRIOPIDÆ
Genus <i>Ptychoptera</i> Meig. 1803	<i>Liriopis</i> Meig. 1800
Genus <i>Idioplata</i> O. S. 1878	<i>Protoplata</i> O. S. 1860

The present paper deals with the tribe *Amphinomini*, and begins the *Polymedini*. The remainder of the *Polymedini*, and the *Megarhinini*, *Petauristini*, *Hexatomi*, and *Pedicini*, as well as the *Cylindrotominae*, *Tipulinae* and *Liriopidae* will be considered in succeeding parts. New stations and new records for the species included in Part I are here given, with the original number in parentheses.

As in the previous part, I must acknowledge the kind advice of Prof. Needham and Prof. Johnson upon certain difficult questions.

34. ***Geranomyia canadensis* Westw.**

Rare. Canada Lake; Caroga T'sh'p; one ♂ only, June 23, 1911.

35. ***Geranomyia rostrata* Say.**

Common and widely distributed. Sacandaga Park; several

along the R. R. embankment, June 21, 1911. On Aug. 24, 1910, the species occurred in extraordinary abundance. Thousands of specimens occurred here and I secured about a dozen at each sweep of the net. They are very active and usually fly directly from the bag, not making their way up the side of the net after the fashion of most crane-flies. Sport Island, N. E. Coast, Aug. 24, 1911; some ten specimens. Johnstown, N. Y.; Sept. 14, 1909. "Psocid Glen"; Aug. 24, 1910. VanDenburgs Pond; Bleecker T'sh'p; Aug. 30, 1909. "Camp Naturalist," alt. 1428 feet; Bleecker T'sh'p; Sept. 14, 1910.

36. *Rhipidia fidelis* O. S.

Rare. Sport Is.; Sacandaga R.; June 27, 1910; ♀.

(1) *Rhipidia maculata* Meig.

Pinnacle Mt.; Bleecker T'sh'p.; alt. 2000 feet; Sept. 15, 1910; ♀.

37. *Furcomya longipennis* Schum.

Common locally. Sacandaga R.; Sport Is. (bayou); Aug. 24, 1910. Hillside Park; Burrs Pond; abundant on marsh vegetation consisting of *Lycersia*, *Bidens*, etc.; Aug. 4, 1909, and Sept. 9, 1910.

38. *Furcomya immodesta* O. S.

Commonly and widely distributed. Sacandaga R.; Sport Is.; Aug. 24, 1910; both sexes; on the mainland, along the R. R. embankment, common; June 21 and 28, 1911. Johnstown; common; June 10, 1910. Gloversville; Power House Woods; Sept. 23, 1910. Woodworth's Lake; Aug. 21, 1909.

39. *Furcomya gladiator* O. S.

Local. Extremely common in B. P. H. U. Swamp, Woodworth's Lake; Aug. 22, 1910; males were more common than females.

40. *Furcomya rostrifera* O. S.

Common, especially in late summer and autumn. Sacandaga Park; along the R. R. embankment; June 27, 1910; June 28, 1911; Aug. 28, 1911. Sammons ville; Sept. 22, 1910; common.

Gloversville; Power-house Woods, Sept. 23, 1910; very abundant on low vegetation. Prairie Lake Bog; Aug. 31, 1911.

41. *Furcomyia liberta* O. S.

A well distributed species at low altitudes. Sacandaga R.; Sport Is.; June 17, 1910; a few, Aug. 24, 1910; June 21, 1911; rare. Johnstown; June 10, 1910, not rare; June 17, 1911.

42. *Furcomyia stigmata* Doane.

Not uncommon about the face of cliffs. Gloversville; stone quarries near the reservoir; June 19, 1910, and June 16, 1911.

A species described from California. Neither Mr. M. D. Leonard nor I can separate the New York specimens off as distinct. It is possible that an actual comparison of specimens would reveal differences. *Stigmata* is distinguished from *haeretica*, O. S., by the shortness of Sc I, a distinct stigmal spot, and the plain brown mesothoracic praescutum.

43. *Furcomyia halterata* O. S.

Local and northern in distribution. Sacandaga Park; along the R. R. embankment; Aug. 24, 1910; ♀'s. Prairie Lake Bog; Aug. 31, 1911; a few. Woodworth's Lake; very common along B. P. H. U. Creek and in the bog-swamp at the head of the creek; Aug. 22, 1910.

44. *Furcomyia badia* Walk.

Not common. "Psocid Glen," Aug. 31, 1910; a few only. Stone quarry on the mountain side, near the Gloversville reservoir; Aug. 29, 1910, and Sept. 7, 1910. Woodworth's Lake; B. P. H. U. Creek; Aug. 22, 1910.

45. *Furcomyia morioides* O. S.

Common and widely distributed. Sacandaga Park; along the R. R. embankment; June 21, 1911. Hillside Park; Sept. 9, 1910. Johnstown; Aug. 6, 1909. "Psocid Glen," Aug. 26, 1910, a few; June 14, 1911, common, both sexes; Aug. 30, 1911, a few.

46. *Furcomyia pubipennis* O. S.

Not rare; Canadian life-zone. Sacandaga Park; along the

R. R. embankment, June 21, 1911; VanDenburg's Pond, June 19, 1911; in a sphagnum bog. Mountain Lake, June 15, 1911; common around the bog-pond. Woodworth's Lake, Aug. 19, 1909; very common about cliffs; both sexes.

47. *Furcomya globithorax* O. S.

Rare; Canadian life-zone. One fine ♀ of this peculiar little species; Woodworth's Lake, along the outlet, Aug. 22, 1910.

48. *Furcomya simulans* Walk.

Not common. East Canada Creek, near Ingram's Mills, Sept. 11, 1911.

49. *Amphinome immatura* O. S.

Rare. Sammonsville, Sept. 22, 1910; a broken specimen in a spider's web. Pinnacle Mt.; near cliffs; ♀; Sept. 16, 1910.

50. *Amphinome solitaria* O. S.

A common species of the Canadian life-zone. "Psocid Glen," Aug. 26, 1910; four ♂'s; Aug. 30, 1911, common, both sexes. Woodworth's Lake; B. P. H. U. Swamp; Aug. 22, 1910.

51. *Amphinome triocellata* O. S.

Rare. Woodworth's Lake; B. P. H. U. Swamp, Aug. 22, 1910, one ♂ only.

52. *Amphinome indigena* O. S.

Common. Sacandaga Park; along the R. R. embankment, June 21, 1911. "Psocid Glen," Aug. 21, 1910. Canada Lake, June 24, 1911. Woodworth's Lake, Aug. 22, 1910; June 23, 1910.

53. *Amphinome tristigma* O. S.

Abundant, northern in distribution. Gloversville; Power-house Woods, common on ferns, etc., July 3, 1910. Woodworth's Lake, B. P. H. U. Swamp, Aug. 22, 1910.

54. *Cryptolabis paradoxa* O. S.

Abundant. Gloversville; Power-house Woods, July 3 and 17, 1909; abundant on low vegetation, such as ferns, etc. Sacandaga R.; Sport Is., July 5 and 25, 1909. Not rare on herb-

age growing amongst shrubbery. June 27, 1910, "Very common on the rank herbage of the northeast coast and specimens could be found in my net at every sweeping. Hundreds—if not thousands—of specimens about." June 21 and 28, 1911, common on Sport Is.

55. *Sacandaga flava* Alex.

Locally common.

Since describing the genus *Sacandaga* (Ent. News, Oct., 1911), I have come to the conclusion that the insect is most closely related to the genus *Rhabdomastix*, Skuse* of Australia. The differences between the two genera are rather numerous, but the resemblances, especially in the genitalia of the male and in the venation, are great, and it is possible that *Sacandaga* will, upon further study, be relegated to subgeneric rank. The genera should have been compared in the original description, but I was not in possession of Skuse's detailed description of *Rhabdomastix* at the time. This comparison is supplied in the following key:—

- A.—Antennae very long, filiform, nearly twice the length of entire body. Wings cuneiformly narrowed towards the base, with only a slight indication of an anal angle. Halteres, long, slender. Venation: Sc rather short, tip of Sc1 remote from the tip of R1; Sc beyond origin of Rs, twice the length of the cross-vein *r-m*. Sc2 absent or indistinct at tip of Sc1. R2+3 (petiole of second submarginal cell of Osten Sacken) one-half of cell R2. Cross-vein *r-m* as long as the basal deflection of Cu1. Second anal short, curved **Rhabdomastix** Skuse.
- AA.—Antennae normal reaching about to the root of the wings. Anal angle present and prominent. Halteres short, abruptly capitate. Venation: Sc long so that Sc1 and R1 are somewhat approximated at the tip; Sc long, beyond the origin of Rs, four times the length of the cross-vein *r-m*. Sc2 conspicuous, removed from the tip of Sc1. R2+3 equal in length to, or longer than, cell R2. Cross-vein *r-m* much shorter than the deflection of Cu1. Second anal prominent, bisinuate **Sacandaga** Alex.

*Diptera of Australia, by F. A. A. Skuse. Proc. of the Linnaean Society of New South Wales; vol. 4 (series 2nd) (25th Sept., 1889); P. 828, 829; Pl. 22, Fig. 15 (wing) Pl. 24, Fig. 57 (♂ genitalia).

Although the two species are almost antipodal in their respective ranges, it is not exceptionally remarkable to find such a distribution. Sport Island is the home of two other insects which are almost equally isolated from their near allies. The primitive crane-fly, *Protoplasa*, occurs here, and finds its only living relative (*Tanyderus*) in Chile and Australasia. The remarkable may-fly, *Siphonisca acrodromia* Ndm. described from this island, finds its near relative in *Oniscogaster wakefieldi*, McLach., of New Zealand. The present occurrence, therefore, merely adds one more difficulty to the explanation of the geographical distribution of animals and plants.

1909—June 12, not rare on Sport Island; July 5, a few. 1910—June 27, male; Aug. 24. 1911—June 21, one male; June 28, several. Gloversville, Power-house Woods, July 3, 1909. Seasonal distribution, June 12-Aug. 24.

The species has been taken only on Sport Island, with the exception of a single specimen at Gloversville, and mainly on the east and northeast coasts, where it may be swept from rank herbage. The vegetation in the places where the species is commonest consists of a dense tangle of herbage, composed mainly of such plants as *Onoclea sensibilis*, *Osmunda claytoniana*, *Veratrum viride*, *Polygonatum biflorum*, *P. commutatum*, *Laportea canadensis*, *Actaea rubra*, *Cryptotaenia canadensis*, *Galium lanceolatum*, *Eupatorium urticaefolium*, *Solidago canadensis*, *S. rugosa*, *S. graminifolia*, *Rudbeckia laciniata* and *Helianthus decapetalus*. The whole undergrowth is thickly intertwined with creepers, such as *Smilax herbacea*, *Clematis virginiana*, *Menispermum canadensis*, *Celastrus scandens* and *Convolvulus sepium*. It is not common, as a rule, but in June several specimens can generally be taken by sweeping. On June 13, 1909, I found the species swarming and made the following observations:

The species came out at about 7.45 P. M. and at 7.51 P. M. began its flight in under an elm tree at the northeast end of the island. The flight was generally forward, but continually from side to side for a few inches. The flight was quite irregular, always toward the slight north breeze. The whole

swarm would often move away and return, a little later, to the first place. It swarmed within four feet of the ground, generally much lower, averaging, perhaps, two feet. The flight is so irregular that it is difficult to describe. The number of individuals participating in the swarm was about twenty. Other species swarming nearby at the same time were *Chironomus hyperboreus*, var. *meridionalis*, Joh., and the may-flies. *Ephemerella excrucians* Walsh, and *Siphonisca aerodromia* Ndm.

Notes on Florida Thysanoptera, with description of a new genus.

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While in Orlando, Florida, engaged in a study of the Aleyrodid pests of *Citrus*, the writer collected several species of Thysanoptera upon which the following notes have been made.

Leptothrips aspersus Hinds.

This species previously recorded from Massachusetts, California and Barbados Island, was frequently found at all times of the year on both new and old *Citrus* foliage.

Scolothrips 6-maculatus Pergande.

The distribution of this species as given by Hinds is Missouri, Iowa, Wisconsin and Nebraska. It has been recorded by both Pergande and Bruner feeding on mites. Found feeding on red spider on *Citrus* and several weeds during Spring of 1909.

Heliothrips hemorrhoidalis Bouche.

This species, which has been spoken of as one of our worst greenhouse pests, was found specially abundant during the Fall of 1908 in colonies on the foliage of red maple (*Acer rubrum*).

Aleurodothrips fasciapennis Franklin.

This species is of special interest from an economic standpoint in that it preys upon both the citrus white-fly (*Aleyrodes citri*) and the cloudy-winged white-fly (*A. nubifera*). It has